

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554**

In the Matter of)	
)	
MARITIME COMMUNICATIONS/LAND	)	EB Docket No. 11-71
MOBILE, LLC	)	File No. EB-09-IH-1751
	)	FRN: 0013587779
Participant in Auction No. 61 and Licensee of)	
Various Authorizations in the Wireless Radio)	
Services)	
)	
Applicant for Modification of Various	)	Application File Nos. 0004030479,
Authorizations in the Wireless Radio Services	)	0004144435, 0004193028, 0004193328,
	)	0004354053, 0004309872, 0004310060,
Applicant with ENCANA OIL AND GAS (USA),	)	0004314903, 0004315013, 0004430505,
INC.; DUQUESNE LIGHT COMPANY; DCP	)	0004417199, 0004419431, 0004422320,
MIDSTREAM, LP; JACKSON COUNTY	)	0004422329, 0004507921, 0004153701,
RURAL MEMBERSHIP ELECTRIC	)	0004526264, 0004636537,
COOPERATIVE; PUGET SOUND ENERGY,	)	and 0004604962
INC.; ENBRIDGE ENERGY COMPANY,)	
INC.; INTERSTATE POWER AND LIGHT)	
COMPANY; WISCONSIN POWER AND)	
LIGHT COMPANY; DIXIE ELECTRIC)	
MEMBERSHIP CORPORATION, INC.;)	
ATLAS PIPELINE – MID CONTINENT,)	
LLC; DENTON COUNTY ELECTRIC)	
COOPERATIVE, INC., DBA COSERV)	
ELECTRIC; AND SOUTHERN CALIFORNIA)	
REGIONAL RAIL AUTHORITY)	

To: Office of the Secretary
Attn: The Honorable Richard L. Sippel
Presiding Judge

**ANSWERS OF PUGET SOUND ENERGY, INC. TO THE ENFORCEMENT BUREAU’S
SECOND SET OF INTERROGATORIES PURSUANT TO ORDER, FCC 14M-22**

Puget Sound Energy, Inc. (“PSE”), for its responses to the Enforcement Bureau’s
 (“Bureau”) second set of interrogatories pursuant to *Order*, FCC 14M-22, states as follows:

GENERAL OBJECTIONS

PSE herein endeavors to respond to the Bureau's Interrogatories as fully and completely as possible and to the best of its information and belief. For the sole purpose of preserving its rights in this proceeding, PSE states that its responses are subject to, qualified by, and limited by the following General Objections which apply to each specific interrogatory as if incorporated and set out in full in response to each.

1. PSE generally objects to each interrogatory to the extent it requires PSE to provide information not within its possession, custody, control, or present knowledge.

2. PSE generally objects to the interrogatories to the extent that they are overly broad, unduly burdensome, and seek discovery of information that is not relevant to any claim raised by the Bureau.

3. PSE generally objects to the Bureau's interrogatories to the extent that they seek information or production of documents protected by the attorney-client privilege, the work product doctrine, the party communication privilege, or any other legally recognized privilege, immunity, or doctrine.

4. PSE generally objects to the Bureau's interrogatories to the extent that they seek information or documents protected from disclosure by a third party confidentiality agreement, statute, regulation, administrative order, or case law.

5. PSE generally objects to the Bureau's interrogatories insofar as they seek confidential and/or proprietary information. To the extent not otherwise objectionable or containing trade secrets, PSE will respond or produce documents or other materials which contain confidential and/or proprietary information consistent with the Protective Order governing use of such documents and information as approved by the Administrative Law Judge.

SPECIFIC RESPONSES TO INTERROGATORIES

PSE submits these responses without prejudice to PSE's right to object to further discovery and reserves the right to supplement any response herein at any time.

1. *Identify the termination date of PSE's agreement with Maritime for use of spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48).*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

Section 2 of the Spectrum Manager Lease Agreement between PSE and Maritime provides as follows:

2. Effective Date and Term: Unless terminated pursuant to the provision of Paragraph 16, below, the initial term of this Agreement shall commence upon the Effective Date of this Agreement and shall expire upon the earlier of (1) the termination of the Asset Purchase Agreement for any reason; or (2) the Closing of the Asset Purchase Agreement.

The Asset Purchase Agreement referenced in Section 2 of the Spectrum Manager Lease Agreement does not specify a date certain when the Asset Purchase Agreement will terminate.

2. *Describe how PSE uses the spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48), including but not limited to the service(s) PSE provides using Fill-In Sites that operate within the coverage parameters of Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48).*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

PSE is Washington State's oldest and largest energy utility, serving approximately 1 million electric customers and nearly 750,000 natural gas customers in a 6,000 square mile service territory in the Puget Sound area of western Washington. PSE also owns and operates

several gas fired generation facilities, hydroelectric generation facilities, and three large wind generation projects around Washington state, outside of its utility service territory. PSE's electric and gas operating territories are depicted on the map at the following page:

https://pse.com/aboutpse/psenewsroom/MediaKit/1213_service_area_map.pdf.

PSE's field crews rely on the company's private mobile radio service (PMRS) facilities to safely and efficiently provide public utility services to the residential, commercial, and industrial customers in its service territory. PSE's employees also rely on these radio facilities in the operation of PSE's combustion turbine generating facilities, hydroelectric generating stations, and wind farms, all of which are subject to local, state and/or federal regulations relating to safety and environmental protection. PSE's crews routinely work on or around hazardous electrical equipment and in natural gas facilities, often times in remote areas and during extreme weather conditions. It is therefore vital, for worker safety and protection of the public and the environment, that PSE's crews have reliable communications.

Prior to 2013, PSE's PMRS system operated on a number of discrete Part 90 radio bands, including a 900 MHz eight-site centralized trunking system, a thirty-one site simplex VHF system, and numerous UHF campus radio systems. In an effort to improve operating efficiencies and to meet the FCC's January 1, 2013, deadline for the narrowbanding of its Part 90 VHF and UHF land mobile radio channels, PSE decided to implement a new consolidated radio system for both its electric and natural gas operations. In furtherance of these plans, PSE devoted significant effort in licensing new frequencies for trunked operation and in acquiring additional spectrum assets through the secondary market that could be used in its wide-area system. Among the goals of the project were improvements in interoperability and intercommunication among

PSE's business units, and the introduction of advanced service features needed by PSE's service personnel.

PSE undertook an extensive analysis of its communications assets and user requirements in order to improve the company's ability to respond to emergencies and also to improve efficiency of routine operations throughout the company. Based on this analysis, PSE's management initiated the Consolidated Radio System Project to develop a common communications platform on which all of PSE's business units could rely.

Given the scope of the Consolidated Radio System, PSE determined that a wide-area trunked system would be required. However, because the FCC has not specifically allocated or reserved any spectrum for trunked use by electric and gas utilities, PSE was required to seek out a sufficient quantity of spectrum in the VHF band through coordination of Part 90 VHF frequencies for trunking authorization and through license assignments in the secondary market. PSE's analysis indicated that AMTS spectrum could be acquired in the secondary market that could be used in its PMRS system. In May 2010, PSE entered a purchase agreement with Environmentel LLC and Skybridge Spectrum Foundation for the partitioning and assignment to PSE of those licensees' geographic licenses for the "A-Block" of AMTS spectrum in PSE's utility service territory. The specific areas encompassed by PSE's geographic AMTS authorizations are defined in the FCC's licensing records for Call Signs WQMZ553 and WQMZ554.

PSE entered a separate agreement in May 2010 with Maritime for lease and purchase of Maritime's Site-Based Authorization KAE889 (Locations 4, 20, 30, 34, and 48) for the same A-Block of AMTS spectrum because Maritime's Site-Based Authorizations had signal contours that covered a significant portion of the western portion of PSE's utility service territory and

within which PSE needed radio coverage. Unless PSE had agreement to lease and/or purchase the Site-Based Authorizations from Maritime PSE would be precluded from operating in those areas under its geographic AMTS licenses because of the co-channel interference protections to which Maritime is entitled under Section 80.385(b) of the FCC's Rules.

PSE's new radio system, completed in September 2013, consists of 54 base station transmitter sites and serves approximately 660 portable (hand-held) units and approximately 1,020 mobile (vehicular-mounted) units, and it allows dispatch from 75 console positions at 21 different dispatch centers throughout PSE's service territory. The system is used daily by field crews and system dispatchers to coordinate activities essential to the construction and maintenance of PSE's electric generating facilities, natural gas storage facilities, and electric and gas transmission and distribution systems. The private radio system is also critical to the safe and efficient restoration of utility service following storms or other disasters when normal means of communications (*e.g.*, landline or cellular telephone service) are congested, are damaged, or are inoperable due to lack of commercial power. By minimizing its reliance on commercial communications networks PSE is better able to respond to emergencies and restore electric and natural gas service needed by the public – including public communications networks. See also response to Item 4, below.

3. *Describe how it would impact PSE's provision of services if operations at Licensed Facilities KAE889-4, KAE889-20, KAE889-30, KAE889-34 and KAE889-48 were deemed permanently discontinued and if PSE could not use the spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48) and any Fill-In Sites that operate within the coverage parameters of Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48).*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

All of PSE's so-called Fill-In Sites operate within the geographic area of PSE's geographic AMTS licenses (Call Signs WQMZ553 and WQMZ554). As the holder of the geographic licenses PSE would continue to have authority, by virtue of its geographic AMTS licenses, to operate at the so-called Fill-In sites even if the Site-Based Authorizations were terminated.

At the northernmost and southernmost portions of PSE's service area PSE's signal contours extend across the boundaries of its geographic license areas but within the authorized contours of the Licensed Facilities. If the Site-Based Authorizations were terminated PSE would have to adjust operations at certain of its stations so that the signal contours of PSE's stations would conform to the geographic boundaries of PSE's geographic AMTS licenses. Termination of the Site-Based Authorizations would create particular difficulties for PSE in the northern part of its service area, at the US/Canada border, because PSE has significant utility assets that are at the border and would be difficult to serve if PSE had to limit its signals to a field strength of 38 dBu at the geographic license area boundary as otherwise required by Section 80.479(b) of the FCC's Rules.

To implement any changes that would be required to maintain an acceptable level of radio service in these areas PSE would likely incur significant additional expense because the technical solutions would probably require installation of a number of very low power transmitters at new transmitter sites with antennas directionalized such that the field strength does not exceed 38 dBu at the geographic license area boundaries. In addition to costs to acquire, permit, and construct additional sites and to purchase and install additional

transmitting equipment, PSE would have to incur additional costs for backhaul from each of these sites, and for networking equipment to handle the added complexity of managing a number of very low power sites, with limited ability to reuse frequencies, in such close proximity. Moreover, as a heavily regulated public utility with multi-year budget cycles it would not be a trivial exercise for PSE to obtain authority for these additional capital expenditures and the additional operations and maintenance (O&M) that would be needed on an ongoing basis for the additional sites. It could be a multi-year process for PSE to obtain all necessary budgetary and land-use approvals and to design, engineer, and install the additional facilities.

4. *Describe how PSE's customers would be affected if PSE could not use the spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48) and any Fill-In Sites that operate within the coverage parameters of Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48).*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

Because PSE uses the AMTS spectrum in a private, internal radio system PSE's direct "customers" on the radio system are PSE's employees and contractors who are responsible for constructing, operating and maintaining PSE's electric generating stations, electric transmission and distribution lines, and natural gas transmission and distribution systems. If PSE's crews and contractors are unable to communicate effectively with PSE's dispatchers, or among themselves in the field, residents and businesses within PSE's utility service area could experience delays in the provisioning of new service or the restoration of service after an outage or system disruption.

Loss of communication, or garbled communications, could also lead to serious injury and/or damage to the utility infrastructure and environment.

Effective and ubiquitous land mobile communications is especially important for utilities following storms or other disasters when there is widespread loss of commercial power and telecommunications services. Utilities such as PSE are reluctant to rely on commercial mobile radio services (CMRS) because commercial systems can become congested with traffic or they cease transmitting when there is a loss of commercial power and inadequate backup power.

Reports by the FCC staff and by the FCC's independent panel reviewing the impact of Hurricane Katrina confirmed the important reasons why utilities such as PSE operate private radio systems; *e.g.,:*

“Any degradation or interruption in the wireless radio systems used by [energy, water and railroad industries] during emergency periods could significantly hamper the efforts of emergency responders and law enforcement, whose success can depend upon the swift and timely receipt of critical information.”

“FCC Staff Report on NTIA's Study of Current and Future Spectrum Use by the Energy, Water and Railroad Industries,” pursuant to Public Law No. 106-553, published July 30, 2002, at 6.

* * *

“Electric utility networks (including utility-owned commercial wireless networks) appeared to have a high rate of survivability following Katrina. These communications systems did not have a significant rate of failure because: (1) the systems were designed to remain intact to aid restoration of electric service following a significant storm event; (2) they were built with significant onsite back-up power supplies (batteries and generators); (3) last mile connections to tower sites and the backbone transport are typically owned by the utility and have redundant paths (both T1 and fixed microwave); and (4) the staff responsible for the communications network have a focus on continuing maintenance of network elements (for example, exercising standby generators on a routine basis).”

“Independent Panel Reviewing the Impact of Hurricane Katrina on Communications Networks: Report and Recommendations to the Federal Communications Commission,” June 12, 2006, at 12-13; footnotes omitted.

5. *Identify the number of customers who would be affected if PSE could not use the spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48) and any Fill-In Sites that operate within the coverage parameters of Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48).*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

PSE is unable to quantify with any degree of certainty the number of its radio network users or utility system customers who would be directly or indirectly affected if PSE could not use the spectrum licensed to Maritime under the Site-Based Authorizations at any so-called Fill-In Sites that operate within the coverage parameters of Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48). As described in response to Item 3, above, PSE would be unable to use radio sites near the boundaries of its geographic area licenses until it could design and implement technical solutions that would ensure adequate radio coverage to PSE's utility operations while also maintaining signal levels below the 38 dBu field strength limit specified by section 80.479(b) of the FCC's Rules for the boundaries of geographic area AMTS licenses.

Loss of radio service in the northern part of PSE's service territory would adversely impact the company's ability to provision and restore electric and gas service to its utility customers in Whatcom County. It would also inhibit PSE's ability to operate the Baker Hydroelectric plant, the Encogen combustion turbine generating station, the Sumas combustion turbine generating station, and the White Horn combustion turbine generating station. It would also affect PSE's operation of the Sumas Crossing, a natural gas facility operated by PSE within just a few meters of the U.S./Canada border, where a bulk natural gas transmission line from Canada enters the United States.

6. *Describe how PSE would provide the services it now provides using spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48) if it could not use that spectrum, and how long it would take to implement those alternatives.*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

PSE has not examined how it would be able to adjust its operations near its license area boundaries if it could no longer use spectrum licensed to Maritime under Site-Based Authorization KAE889 (locations 4, 20, 30, 34 and 48). If its PMRS operations had to be suspended in one or more areas, PSE would probably have to equip all of its field crews working in these areas with cellphones. It would also have to adjust its normal dispatching and operating protocols to accommodate the inherent limitations of relying on cellphones for these types of services (*e.g.*, inability to easily make group calls; additional time needed for set-up of each call; potential limitations in coverage) and to develop work-arounds in the event the cellular network is congested or unavailable when service is needed most. For example, certain utility operations, such as line-switching, require everyone working on or near the line to be able to hear and respond to everyone else working on the line. Such group calling, or “push-to-talk,” capability is not routinely available from most commercial mobile radio service providers.

7. *Identify each individual who provided information that was used to respond to this set of interrogatories and for each such individual, the interrogatory or interrogatories to which his/her information was responsive.*

ANSWER: Subject to and without waiving the above general objections, PSE responds as follows:

Except as to matters for which official notice may be taken, the information for all responses was provided by Jiri Sykora, Senior Radio Engineer, Puget Sound Energy, 9515 Willows Road NE, Redmond, WA 98052. Telephone: 425-867-7335.

Respectfully submitted,

PUGET SOUND ENERGY, INC.

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Dated: August 6, 2014

DECLARATION

I, Jiri Sykora, state that I am Senior Radio Engineer for Puget Sound Energy, Inc.; that I have assisted in the preparation of and have reviewed the responses of Puget Sound Energy, Inc. to the Enforcement Bureau's Second Set of Interrogatories, dated July 23, 2014, in EB Docket No. 11-71 before the Federal Communications Commission; that I am familiar with the factual matters addressed in said responses; and that except for those matters of which official notice may be taken, the factual assertions made in said responses are, to the best of my knowledge, information, and belief, true and accurate, and are made in good faith.

I hereby declare under penalty of perjury that the foregoing is true and correct.

Executed this 6th day of August, 2014.


Jiri Sykora

CERTIFICATE OF SERVICE

I, Michaelleen Terrana, do hereby certify that on this 6th day of August, 2014, a single copy (unless otherwise noted) of the foregoing “Answers of Puget Sound Energy. Inc. to the Enforcement Bureau’s Second Set of Interrogatories Pursuant to *Order*, FCC 14M-22,” was delivered to the following by electronic mail and first-class United States mail, postage prepaid, unless otherwise indicated:

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